Claims.

[Claim 1] (Currently Amended)

1. A method of addressing a continuous range of locations in physical media that employs interference of at least two waves propagating in continuous media, wherein fronts of these waves meet at a location inside the media and said location uniquely identifies a location within said continuous range.

[Claim 2] (Currently Amended)

2. A method of claim 1, wherein at least two waves propagate in the same direction with different phase velocities and fronts of these waves meet at a location inside the media and said location uniquely identifies a location within said continuous range.

[Claim 3] (Currently Amended)

3. A method of claim 1, wherein said waives propagate through distinct passes, and wherein fronts of these waves interfere in a media that reveal nonlinear properties and said interference uniquely identifies a location within said continuous range.

[Claim 4] (Currently Amended)

4. A method of claim 3, wherein there are at least two waves propagating in the same direction with different phase velocities.

[Claim 5] (Currently Amended)

5. A method of claim 1, wherein at least two waves have shape of pulses with defined length.

[Claim 6] (Originally filed)

6. A method of claim 2, wherein at least two waves have shape of pulses with defined length.

[Claim 7] (Currently Amended)

7. A method of claim 3, wherein at least two waves have shape of pulses with defined length.

[Claim 8] (Originally filed)

8. A method of claim 4, wherein at least two waves have shape of pulses with defined length.

[Claim 9] (Currently Amended)

9. A method of claim 5, wherein at least one of the pulses has Gaussian shape.

[Claim 10] (Currently Amended)

10. A method of claim 6, wherein at least one of the pulses has Gaussian shape.

[Claim 11] (Currently Amended)

11. A method of claim 7, wherein at least one of the pulses has Gaussian shape.

[Claim 12] (Currently Amended)

12. A method of claim 8, wherein at least one of the pulses has Gaussian shape.

[Claim 13] (Currently Amended)

13. A method of claim 3, wherein properties of said propagation media are nonlinear with respect to amplitude of at least one of said waves.

[Claim 14] (Originally filed)

14. Method of claim 2 , wherein properties of said propagation media nonlinear with respect to amplitude of at least one of said waves.

[Claim 15] (Currently Amended)

15. An artificially produced structure capable of propagating particular types of waves with low attenuation and utilizing method of claim 1 to dynamically alter a physical property of confined volume of compositing structure.

[Claim 16] (Originally filed)

16. An artificially produced structure of claim 15, wherein said structure has at least one of its base dimensions (height, width, length) 100 times larger than

other two dimensions.

[Claim 17] (Originally filed)

17. An artificially produced structure of claim 16 that can be bent to form a loop with minimal diameter less than 5 mm.

[Claim 18] (Currently Amended)

18. An artificially produced structure of claim 15 that shaped like a fiber and arranged to cover two-dimensional surface using ordered pattern.

[Claim 19] (Originally filed)

19. A structure of claim 18 where in said pattern resembles woven fabric.

[Claim 20] (Originally filed)

20. A structure of claim 18 where in said pattern is parallel lines.

[Claim 21] (Originally filed)

21. A structure of claim 19 where in said pattern is rows and columns, wherein angle between the rows and the columns may be other then $\pi/2$.

[Claim 22] (Originally filed)

22. An artificially produced structure of claim 15 , wherein said structure has at least one of its base dimensions (height, width, length) 100 times smaller other dimension.

[Claim 23] (Currently Amended)

23. An artificially produced structure capable of propagating particular types of waves with low attenuation that uses method of claim 1 to query a value of predefined physical property of dynamically selected confined volume of compositing structure.

[Claim 24] (Currently Amended)

24. A structure of claim 15 that contains materials with electro-optical properties and said properties are dynamically changeable.

[Claim 25] (Canceled)

[Claim 26] (Currently Amended)

26. A structure of claim 15, wherein said composing structure contains array of discrete microstructures.

[Claim 27] (Canceled)